



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6405G02131-3G-5

Job Sheet 169930



Part No: RBW6405G02131-3G-5

Job Qty: 4 ea

Part Name: Quarter Bell



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/3/18

Job Tracking No:

Due Date: 1/26/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBW6405G02131-3G REV D SHEET 4 IPP Rev.A 17.08.30 New issue DP Verify DD/IPP Rev D 17.11.15 Rev D DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	1/11/18	1/11/18	0.00	0.00	Start Up Machining-3		SL 18-1-31
110	CNC Lathe	4 pcs	1/12/18	1/12/18	0.00	1.00	MORI SL-154		SL
120	QC	4 pcs	1/12/18	1/12/18	0.00	0.00	QC2 Machining-4		SL
130	QC	4 pcs	1/12/18	1/12/18	0.00	0.00	QC8 Machining-4		SL
140	Outsource	4 pcs	1/26/18				GRO002-VC	Outsource 10	18-02-01
150	Packaging	4 pcs	1/26/18	1/26/18	0.00	0.00	Packaging2		AT 18/02/15
160	QC	4 pcs	1/26/18	1/26/18	0.00	0.00	QC6		38
210	Packaging	4 pcs	1/26/18	1/26/18	0.00	0.00	Packaging3-1	GA	FEB 16 2018
220	QC21-SA	4 Ea	1/26/18	1/26/18	0.00	0.00	QC21		FEB 16 2018

Part Op 110 - 1-Machine as per DWG. FB622 FOLIO REV: _____ DWG REV: _____ 2-Deburr
Descriptions: 140 - -Issue P/O to Groupe Altech: P/O 038997 -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required

FEB 08 2018

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	MT-4140QT-R1.000	1	9	0	0

SC33398

6

Part Specifications

Specifications could not be found.

Plex 1/3/18 1:41 PM Dart.lajeunesse.marie

DART
AEROSPACE
S037728

Dart Aerospace Ltd.

1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Quarter Bell

PART NO: RBW6405G02131 – 3G – 5

Original Serial #: S037728

Revision:

Operation: Start up Operation 02/01/18

Change No:

Job No: 169930

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

8 7 6 5 4 3 2 1

D

D

C

C

B

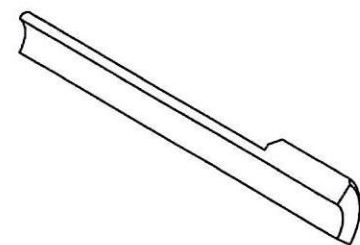
B

A

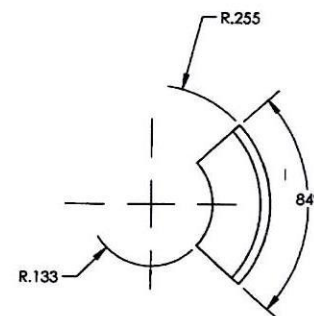
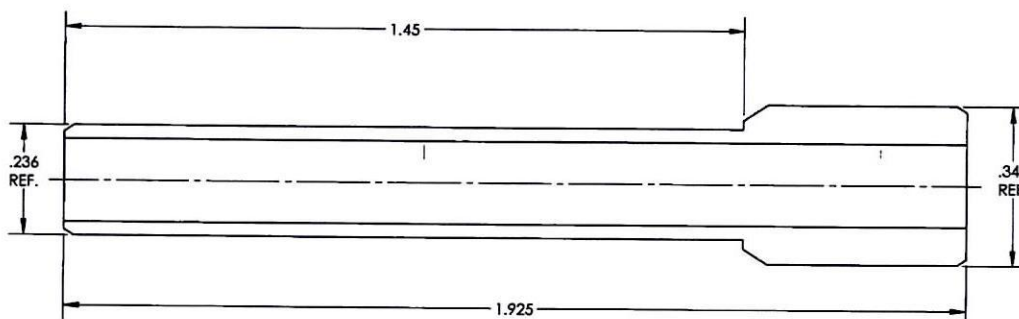
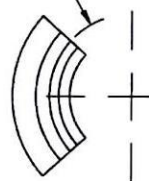
A

.02 X 45° CMF
2 PL.

.05 X 45° CMF



R.176



RBW6405G02131-3G-5 QUARTER BELL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 169930 M.L.S.
18-01-04

NOTES:

- 1) MATERIAL: AISI 4140/4142 Q & T
- 2) HEAT TREAT: 28-34 Rc
- 3) FINISH: ZINC PLATE
- 4) SPEC: ASTM B633 TYPE I, SC 2
- 5) BREAK ALL SHARP EDGES .015 x 45° OR .015R
- 6) IDENTIFICATION: N/A

DART AEROSPACE Newbury, Ontario, Canada	
TITLE QUARTER BELL	
DWG NO. RBW6405G02131-3G-5	REV D
DESIGN BY: VM 10/18/2017	XXX ± .005 FRACTIONS & 1/8
DRAWN BY: VM 10/30/2017	XX ± .01 ANGLES & 5°
CHECKED: SAC 10/30/2017	X ± .1 SURFACES = 125
MFG. APPR: DD 10/31/2017	1. DIMENSIONS ARE IN INCHES
APPROVED: VM 11/02/2017	2. INTERPRET DIM AND TOL PER
DATE: 10/30/2017	ASME Y14.35-2009
SCALE: NTS	3. DIMENSIONAL LIMITS APPLY
WEIGHT: 0.009 LBS	AFTER PLATING
SHEET 4 OF 4	
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USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION	
FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038997

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO038997

PO Date: 2/8/18

Due Date: 2/15/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

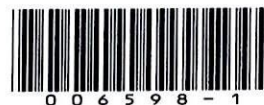
E-MAILED
FEB 12 2018

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	169930	RBW6405G02131-3G-5	Quarter Bell -Issue P/O to Groupe Altech; P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	2/15/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$11.25/pcs	\$45.00 AT 18/02/15
2	170256	RBT18560-3	Ring -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/15/18	7 pcs	0 pcs	7 pcs	\$6.3158/pcs	\$44.21
3	170479	646.3910	Shim Issue P/O: _____ Cad Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	2/15/18	33 pcs	0 pcs ✓ 33x	33 pcs	\$4.16/pcs	\$137.28 AT 18/02/15
4	170481	646.3912	Shim Issue P/O: _____ Cat Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	2/15/18	22 pcs	0 pcs	22 pcs	\$4.16/pcs	\$91.52
5	170703	RBT18560-9	Cross Bar -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/15/18	6 pcs	0 pcs	6 pcs	\$6.3158/pcs	\$37.89
6	171015	RBW6405G02131-3G-5	Quarter Bell -Issue P/O to Groupe Altech;	Firmed	2/15/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$11.25/pcs	\$45.00 AT 18/02/15



2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Certificat de Conformité / Certificate of Compliance



Bon de Livraison / Packing Slip

006598 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.					
14-Feb-2018		Curtis Anderson	038997						
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order	
1	RBW6405G02131-3G-5 Rev.	QUARTER BELL 01-ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] SPÉC: ASTM B633 TYPE 1 SC2 ***	ZINC CH	4	4	0	0	0	
3	646.3910 SHIM Rev.	646.3910 SHIM CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	33	33	0	0	0	
6	RBW6405G02131-3G-5 Rev.	QUARTER BELL 01-ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] SPÉC: ASTM B633 TYPE 1 SC2 ***	ZINC CH	4	4	0	0	0	

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.